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# Water Department starts upgrade with automated meters

\$75 million project to record usage hourly, aims to cut service complaints

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*Plain Dealer Reporter*

The Cleveland Water Department will spend \$75 million in the next year and a half outfitting water meters with new technology that will automatically report water usage on an hourly basis — an upgrade that water officials say will dramatically improve customer service in a department once beleaguered by complaints of incorrectly estimated bills.

Technicians began installing the new equipment on Tuesday in commercial properties throughout the region and by June should move on to residential areas. The department plans to pause once it reaches 25,000 installations to assess the technology and work out bugs.

But if all goes well, the department hopes to reach all 420,000 customers in 70 Northeast Ohio communities by the end of 2013, said Jason Wood, chief of public affairs for the city's Public Utili-

ties Department.

The new technology is a cornerstone of a plan to overhaul the Water Department after weathering years of criticism and complaints about inaccurate bills, faulty meters and poor customer service.

Wood said that since the turnaround project began a year ago, call center operations have been streamlined and customer service representatives have been cross-trained to handle all call types.

## Water plans

If all goes well, the Cleveland Water Department hopes to have outfitted water meters with new technology that will automatically report water usage on an hourly basis for all of the department's 420,000 customers in 70 Northeast Ohio communities by the end of 2013.

## More inside

For how it works, see graphic, page A8.

SEE WATER | A8



THOMASONDREY | THE PLAIN DEALER

Cleveland Water Department workers install an automatic meter reader in a vault in front of Apria Healthcare in Brooklyn Heights last week. Normally two people would do the job, but some of the workers were observing how to install the meter. The department is hoping the new technology will reduce billing problems.

## WATER

FROM A1

### Department starts upgrade with automated meters

Callers who once remained on hold for 45 minutes or longer now receive assistance within 30 seconds, he said.

The automated meter-reading system will further enhance customer service by giving the department tools to more closely monitor water use and diagnose problems, such as leaky faucets and running toilets, before they lead to higher-than-normal bills that incense customers, Wood said.

The system uses low-frequency radio transmitters, called "end-points," which will be installed on the outside of each house to harvest usage information, including peak use times. The data

are transmitted to one of 36 "collectors" affixed to telephone poles or other high perches throughout the area. About 150 devices called "repeaters" help bounce signals to collectors from more-remote locations.

The Water Department will bill customers monthly based on actual water use — virtually ending the practice of estimating bills when faulty meters go undetected for an entire quarter, Wood said.

Officials expect the system to pay for itself in about eight years by phasing out jobs and reducing the need for vehicles and fuel. Meter readers will be reassigned to inspection, maintenance, leak detection and customer service crews.

### Technology yields more-accurate readings

The technology has been used for years in other major cities and has earned rave reviews.

Both Phoenix and Philadelphia have systems that require meter readers to drive within a certain distance of each property to pick up data. While that limits water departments to collecting data once a month, rather than continuously, the technology yields more-accurate reads than conventional meter reading and saves time for technicians, who can remain in their vehicles while collecting information, according to officials in both cities.

Charles Kiely, assistant general manager of consumer services for the District of Columbia Water and Sewer Authority, said Washington, D.C., wrestled with customer service problems similar to Cleveland's before installing its meter-reading system in 2002. Customers were left on hold at the call center for long stretches before their billing problems were addressed, and up to 25 percent of quarterly bills were estimated.

Since installing the automated system, Kiely said, the department has been able to analyze customer accounts, spot trends in water consumption and flag irregularities that could indicate leaks. And the system even uses text messages, voicemail and email to alert customers of problems that persist over a three-day stretch — a feature popular among landlords, who typically hold large accounts and might be unaware of problems such as running toilets, Kiely said.

Customers can go online, too, and view their own usage, which Kiely said has led to a 2 percent decline in water consumption, as customers have begun to use water more conscientiously.

Wood said the Cleveland Water Department hopes to launch similar Web applications eventually. But first, the department must clear a major logistical hurdle — gaining access to water meters in 420,000 properties, usually in basements.

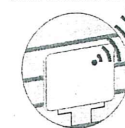
Crews hope to work at a pace of about 1,100 installations a day beginning this summer with areas in most need of new equipment, such as Reminderville and Twinsburg.

Customers, all of whom are required to participate in the sys-

### Water Department's plan for accurate billing

The Cleveland Water Department will spend the next year and a half outfitting customers' conventional water meters with new technology that automatically reports a household's water usage on an hourly basis. Water Department officials hope the \$85 million upgrade will dramatically improve customer service in a department once beleaguered with complaints of incorrectly estimated bills.

#### How the new technology will work



1. A low-frequency radio transmitter will be installed at each house. Meters 10 years old and older will be replaced, others retrofitted.



2. Water usage data will be collected hourly and sent to 36 collectors, which will relay information to Cleveland Water Department.



3. Data are used for accurate billing based on actual use, instead of from estimates. Possible leaks can be flagged for repairs.

SOURCE: Cleveland Water Department

KEN MARSHALL | THE PLAIN DEALER

**"New technology, no matter what department is implementing it, is always disruptive at first."**

Mayor Deborah Sutherland  
of Bay Village

new technology and instructing them to schedule an appointment with a technician. The upgrade takes about an hour, Wood said, and weekend and evening appointments will fill up fast.

Wood said the department expects to receive an influx of calls from customers angry to learn that newly calibrated meters combined with more accurate data collection lead to higher bills. But once customers adjust to the new accuracy standard, call center operators will field far fewer complaints than in years past, Wood said.

### Mayor looks forward to automated readings

Bay Village Mayor Deborah Sutherland said residents who once called her office regularly to lodge complaints about Cleveland water bills now seem content with the improvements to customer service. But she hopes the installation of the meter-reading system will resolve lingering problems.

For example, the city's water bill last quarter topped \$7,000 — a tenfold anomaly over most quarters, she said. Upon investigation, the Cleveland Water Department discovered a broken connection underground in front of City Hall and credited the city about \$6,300.

as soon as it occurred, rather than allowing it to persist until the city was billed for it.

"New technology, no matter what department is implementing it, is always disruptive at first," Sutherland said. "But once we work through those initial issues, automatic meter reading promises to be much, much more accurate."

But Cleveland Councilman Mike Polensek, who, along with six of his colleagues, voted against authorizing the \$75 million upgrade in 2010, said he does not believe investing in more-sophisticated technology is the answer to the Water Department's woes — especially when his constituents report that basic customer service problems still have not been addressed.

In an era of decreasing population and water consumption, the money would be better spent on hiring more meter readers and customer service representatives than on "Star Wars" technology to collect data on water use, Polensek said.

"This is not rocket science," Polensek said. "It's just good management. It's about identifying the needs and addressing those needs. And when getting from Point A to Point B, you can either get there in a Lamborghini or you can get there in a Chevy. And this system is just not cost-effective."